



IFWO

**RAW SEQUENCE LISTING**  
PATENT APPLICATION: US/10/828,343

DATE: 08/04/2004  
TIME: 12:30:01

Input Set : N:\Crf3\RULE60\10828343.raw  
Output Set: N:\CRF4\08042004\J828343.raw

## **SEQUENCE LISTING**



**ENTERED**

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45 (ii) MOLECULE TYPE: DNA (genomic)  
 46 (ix) FEATURE:  
 47 (A) NAME/KEY: CDS  
 48 (B) LOCATION: 1..612  
 49 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:  
 50 ATG TGC TGG TTC AAG TTG TGG TCT CTC TTG CTG GTC GGT TCA CTG CTG 48  
 51 Met Cys Trp Phe Lys Leu Trp Ser Leu Leu Leu Val Gly Ser Leu Leu  
 52 1 5 10 15  
 53 GTA TCT GGA ACG CGG GGC AAG TTG CCG GAC GCC CCC GAG TTT GAA AAG 96  
 54 Val Ser Gly Thr Arg Gly Lys Leu Pro Asp Ala Pro Glu Phe Glu Lys  
 55 20 25 30  
 56 GAT CTT CTC ATT CAG AGA CTC AAT TGG ATG CTA TGG GTG ATC GAT GAA 144  
 57 Asp Leu Leu Ile Gln Arg Leu Asn Trp Met Leu Trp Val Ile Asp Glu  
 58 35 40 45  
 59 TGC TTC CGC GAC CTC TGT TAC CGT ACC GGC ATC TGC AAG GGT ATT CTA 192  
 60 Cys Phe Arg Asp Leu Cys Tyr Arg Thr Gly Ile Cys Lys Gly Ile Leu  
 61 50 55 60  
 62 GAG CCC GCT GCT ATT TTT CAT CTG AAA CTA CCA GCC ATC AAC GAT ACT 240  
 63 Glu Pro Ala Ala Ile Phe His Leu Lys Leu Pro Ala Ile Asn Asp Thr  
 64 65 70 75 80  
 65 GAT CAC TGC GGG TTA ATA GGA TTT AAT GAG ACT AGC TGC CTT AAA AAG 288  
 66 Asp His Cys Gly Leu Ile Gly Phe Asn Glu Thr Ser Cys Leu Lys Lys  
 67 85 90 95  
 68 CTC GCC GAT GGC TTT TTT GAA TTC GAG GTG TTG TTT AAG TTT TTA ACG 336  
 69 Leu Ala Asp Gly Phe Phe Glu Phe Val Leu Phe Lys Phe Leu Thr  
 70 100 105 110  
 71 ACG GAG TTT GGA AAA TCA GTG ATA AAC GTG GAC GTC ATG GAG CTT CTG 384  
 72 Thr Glu Phe Gly Lys Ser Val Ile Asn Val Asp Val Met Glu Leu Leu  
 73 115 120 125  
 74 ACG AAG ACC TTA GGA TGG GAC ATA CAG GAA GAG CTC AAT AAG CTG ACT 432  
 75 Thr Lys Thr Leu Gly Trp Asp Ile Gln Glu Glu Leu Asn Lys Leu Thr  
 76 130 135 140  
 77 AAG ACG CAC TAC AGT CCA CCC AAA TTT GAC CGC GGT CTA TTA GGG AGG 480  
 78 Lys Thr His Tyr Ser Pro Pro Lys Phe Asp Arg Gly Leu Leu Gly Arg  
 79 145 150 155 160  
 80 CTT CAG GGA CTT AAG TAT TGG GTG AGA CAC TTT GCT TCG TTT TAT GTT 528  
 81 Leu Gln Gly Leu Lys Tyr Trp Val Arg His Phe Ala Ser Phe Tyr Val  
 82 165 170 175  
 83 CTG AGT GCA ATG GAA AAG TTT GCA GGT CAA GCG GTG CGT GTT TTG GAC 576  
 84 Leu Ser Ala Met Glu Lys Phe Ala Gly Gln Ala Val Arg Val Leu Asp  
 85 180 185 190  
 86 TCT ATC CCA GAC GTG ACT CCT GAC GTC CAC GAT AAG 612  
 87 Ser Ile Pro Asp Val Thr Pro Asp Val His Asp Lys  
 88 195 200  
 90 (2) INFORMATION FOR SEQ ID NO: 2:  
 91 (i) SEQUENCE CHARACTERISTICS:  
 92 (A) LENGTH: 204 amino acids  
 93 (B) TYPE: amino acid  
 94 (D) TOPOLOGY: linear

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95       (ii) MOLECULE TYPE: protein  
 96       (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
 97       Met Cys Trp Phe Lys Leu Trp Ser Leu Leu Val Gly Ser Leu Leu  
 98                1                5               10               15  
 99       Val Ser Gly Thr Arg Gly Lys Leu Pro Asp Ala Pro Glu Phe Glu Lys  
 100                20               25               30  
 101       Asp Leu Leu Ile Gln Arg Leu Asn Trp Met Leu Trp Val Ile Asp Glu  
 102                35               40               45  
 103       Cys Phe Arg Asp Leu Cys Tyr Arg Thr Gly Ile Cys Lys Gly Ile Leu  
 104                50               55               60  
 105       Glu Pro Ala Ala Ile Phe His Leu Lys Leu Pro Ala Ile Asn Asp Thr  
 106                65               70               75               80  
 107       Asp His Cys Gly Leu Ile Gly Phe Asn Glu Thr Ser Cys Leu Lys  
 108                85               90               95  
 109       Leu Ala Asp Gly Phe Phe Glu Val Leu Phe Lys Phe Leu Thr  
 110                100              105              110  
 111       Thr Glu Phe Gly Lys Ser Val Ile Asn Val Asp Val Met Glu Leu Leu  
 112                115              120              125  
 113       Thr Lys Thr Leu Gly Trp Asp Ile Gln Glu Leu Asn Lys Leu Thr  
 114                130              135              140  
 115       Lys Thr His Tyr Ser Pro Pro Lys Phe Asp Arg Gly Leu Leu Gly Arg  
 116                145              150              155              160  
 117       Leu Gln Gly Leu Lys Tyr Trp Val Arg His Phe Ala Ser Phe Tyr Val  
 118                165              170              175  
 119       Leu Ser Ala Met Glu Lys Phe Ala Gly Gln Ala Val Arg Val Leu Asp  
 120                180              185              190  
 121       Ser Ile Pro Asp Val Thr Pro Asp Val His Asp Lys  
 122                195              200

## 124 (2) INFORMATION FOR SEQ ID NO: 3:

125       (i) SEQUENCE CHARACTERISTICS:  
 126               (A) LENGTH: 212 amino acids  
 127               (B) TYPE: amino acid  
 128               (C) STRANDEDNESS:  
 129               (D) TOPOLOGY: linear

130       (ii) MOLECULE TYPE: protein

131       (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:  
 132       Met Asn Ser Phe Ser Thr Ser Ala Phe Gly Pro Val Ala Phe Ser Leu  
 133                1                5               10               15  
 134       Gly Leu Leu Leu Val Leu Pro Ala Ala Phe Pro Ala Pro Val Pro Pro  
 135                20               25               30  
 136       Gly Glu Asp Ser Lys Asp Val Ala Ala Pro His Arg Gln Pro Leu Thr  
 137                35               40               45  
 138       Ser Ser Glu Arg Ile Asp Lys Gln Ile Arg Tyr Ile Leu Asp Gly Ile  
 139                50               55               60  
 140       Ser Ala Leu Arg Lys Glu Thr Cys Asn Lys Ser Asn Met Cys Glu Ser  
 141                65               70               75               80  
 142       Ser Lys Glu Ala Leu Ala Glu Asn Asn Leu Asn Leu Pro Lys Met Ala  
 143                85               90               95  
 144       Glu Lys Asp Gly Cys Phe Gln Ser Gly Phe Asn Glu Glu Thr Cys Leu

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145           100          105          110
146 Val Lys Ile Ile Thr Gly Leu Leu Glu Phe Glu Val Tyr Leu Glu Tyr
147           115          120          125
148 Leu Gln Asn Arg Phe Glu Ser Ser Glu Glu Gln Ala Arg Ala Val Gln
149           130          135          140
150 Met Ser Thr Lys Val Leu Ile Gln Phe Leu Gln Lys Lys Ala Lys Asn
151           145          150          155          160
152 Leu Asp Ala Ile Thr Thr Pro Asp Pro Thr Thr Asn Ala Ser Leu Leu
153           165          170          175
154 Thr Lys Leu Gln Ala Gln Asn Gln Trp Leu Gln Asp Met Thr Thr His
155           180          185          190
156 Leu Ile Leu Arg Ser Phe Lys Glu Phe Leu Gln Ser Ser Leu Arg Ala
157           195          200          205
158 Leu Arg Gln Met
159           210

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161 (2) INFORMATION FOR SEQ ID NO: 4:

162 (i) SEQUENCE CHARACTERISTICS:  
 163 (A) LENGTH: 211 amino acids  
 164 (B) TYPE: amino acid  
 165 (C) STRANDEDNESS:  
 166 (D) TOPOLOGY: linear

167 (ii) MOLECULE TYPE: protein

168 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

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  Met Lys Phe Leu Ser Ala Arg Asp Phe His Pro Val Ala Phe Leu Gly
169           1           5           10          15
  170           20          25          30
  Leu Met Leu Val Thr Thr Thr Ala Phe Pro Thr Ser Gln Val Arg Arg
171           35          40          45
  172           50          55          60
  Gly Asp Phe Thr Glu Asp Thr Thr Pro Asn Arg Pro Val Tyr Thr Thr
173           65          70          75          80
  174           85          90          95
  Ser Gln Val Gly Gly Leu Ile Thr His Val Leu Trp Glu Ile Val Glu
175           100         105         110
  176           115         120         125
  Met Arg Lys Glu Leu Cys Asn Gly Asn Ser Asp Cys Met Asn Asn Asp
177           130         135         140
  178           145         150         155          160
  Asp Ala Leu Ala Glu Asn Asn Leu Lys Leu Pro Glu Ile Gln Arg Asn
179           165         170         175
  180           180         185         190
  Asp Gly Cys Tyr Gln Thr Gly Tyr Asn Gln Glu Ile Cys Leu Leu Lys
181           195         200         205
  182           210         215         220
  Ile Ser Ser Gly Leu Leu Glu Tyr His Ser Tyr Leu Glu Tyr Met Lys
183           230         235         240
  184           245         250         255
  Asn Asn Leu Lys Asp Asn Lys Lys Asp Lys Ala Arg Val Leu Gln Arg
185           265         270         275
  186           280         285         290
  Asp Thr Glu Thr Leu Ile His Ile Phe Asn Gln Glu Val Lys Asp Leu
187           295         300         305
  188           310         315         320
  His Lys Ile Val Leu Pro Thr Pro Ile Ser Asn Ala Leu Leu Thr Asp
189           330         335         340
  190           345         350         355
  Lys Leu Glu Ser Gln Lys Glu Trp Leu Arg Thr Lys Thr Ile Gln Phe
191           360         365         370
  192           375         380         385
  Ile Leu Lys Ser Leu Glu Glu Phe Leu Lys Val Thr Leu Arg Ser Thr
193           390         395         400
  194           405         410         415

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195 Arg Gln Thr  
196 210

**VERIFICATION SUMMARY**

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Input Set : N:\Crf3\RULE60\10828343.raw  
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L:22 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]  
L:23 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]  
L:29 M:220 C: Keyword misspelled or invalid format, [(vii) PRIOR APPLICATION DATA:]  
L:32 M:220 C: Keyword misspelled or invalid format, [(viii) ATTORNEY/AGENT INFORMATION:]  
L:36 M:220 C: Keyword misspelled or invalid format, [(ix) TELECOMMUNICATION INFORMATION:]